What is claimed is:

1.   A method of release planning, the method comprising the steps of:

assigning stakeholder priorities to a set of requirements, where the priorities are assigned by plural stakeholders;

explicitly defining a set of constraints on the requirements;

using algorithms carried out by a computer, exploring release plan solutions that satisfy the constraints and balance between stakeholder priorities of different stakeholders to generate a set of candidate release plan solutions that have a positive impact on at least one of project time, overall cost and quality; and

selecting at least one release plan solution from the set of candidate release plan solutions.

2.   The method of claim 1 in which operating on the stakeholder priorities with algorithms using a computer is carried out repeatedly after changing one or more of the constraints, requirements or stakeholder priorities.

3.   The method of claim 1 in which a set of release plan solutions is generated and the solution set is further qualified by applying a concordance/non-discordance principle.

4.   The method of claim 3 in which the algorithms comprise one or more of genetic algorithms, heuristic algorithms and integer programming algorithms.

5.   The method of claim 4 in which the algorithms use at least one objective function to evaluate release plan solutions.

6.   The method of claim 5 in which the objective function comprises an aggregation of stakeholder priorities or value estimates.

7.   The method of claim 6 in which computation of the algorithms is carried out externally from an application service provider, and stakeholder priorities are input to the computer from remote locations.

8.   The method of claim 2 in which changing the requirements comprises actions chosen from a group consisting of:
    adding additional requirements;
    removing existing requirements;
    modifying existing requirements; and
    adjusting stakeholder priorities.

9   The method of claim 2 further comprising the step of assigning the requirements to one of the next release, the next but one release, or unassigned.

10.   The method of claim 9 in which repeating the step of operating on the stakeholder priorities or value estimates with the algorithms comprises using the unassigned requirements as the requirements in the repeated step.

11.   The method of claim 1 in which selecting a release plan solution from the set of candidate release plan solutions is carried out by a problem solver.

12.   The method of claim 1 in which the method is carried out through a hybrid approach integrating computational intelligence and human intelligence.

13.   The method of claim 1 in which the set of constraints is chosen from a group consisting of precedence relationships between requirements, coupling relationships between requirements, effort, resource, budget, risk, and time.

14.   The method of claim 1 in which stakeholder priorities are represented by a numerical value representing stakeholder satisfaction that a requirement be assigned to

one of three categories, the categories consisting of the next release, the next but one release, and postponed.

15.   The method of claim 1 in which the requirements are grouped into groups of requirements and the algorithms balance between stakeholder priorities assigned to the groups of requirements.

16.   The method of claim 1 in which stakeholders prioritize subsets of the complete set of requirements.

17.   The method of claim 1 further comprising providing on demand an answer to questions chosen from a group of questions consisting of:

    why requirements are assigned to a certain release;
    why requirements are not assigned to a certain release;
    which are commonalities in the proposed solutions; and
    which are differences in the proposed solutions.

18.   The method of claim 1 where a set of near optimal and maximally distinct alternative release plan solutions is generated.

19.   The method of claim 1 where different use cases are predefined

20.   The method of claim 21 where process guidance is provided to perform the scenario use cases.

21.   A computer programmed to carry out the method steps of claim 1.

22.   Computer readable media containing instructions for a computer to carry out the method steps of claim 1.